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ABSTRACT

This study was concerned with whether or not supplementary work in the subskill areas of comprehension would increase the overall comprehension level of pupils more than supplementary work with vocabulary development exercise. Sixth-six fourth grade pupils in a middle-class suburban community in central New Jersey were selected as subjects. A control group design was used and both groups spent approximately 20 to 30 minutes a day working at the exercises independently during seat work time, while the teacher conducted the regular basal reading instruction. Pretests and posttests were administered using alternate forms of the Gates Mac Ginitie Comprehension Test Level D. The main statistical analysis concerned comparison of mean scores for both groups. Statistical significance was evaluated by the t test. The comprehension achievement of the top 27 percent and the bottom 27 percent of the pupils tested was also analyzed. All analyses showed no statistical significance at the .05 level between the means of the supplementary comprehension group and the supplementary vocabulary group. Also, no statistical significance could be established between the means of the high scoring pupils nor between the means of the low scoring pupils. (Author/WR)

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THE USE OF COMPREHENSION DEVELOPMENT MATERIALS FOR IMPROVING COMPREHENSION ACHIEVEMENT WITH FOURTH GRADE PUPILS

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A THESIS

SUBMITTED TO THE FACULTY

OF THE GRADUATE SCHOOL OF EDUCATION

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BY

MILDRED GOLDMAN

IN PARTIAL FULFILLMENT OF THE

REQUIREMENTS FOR THE DEGREE

OF

MASTER OF EDUCATION

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NEW BRUNSWICK, NEW JERSEY JUNE, 1973

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CHAPTER I

INTRODUCTION TO THE PROBLEM

Background of the Problem

Various reading experts have presented different analyses of the processes or skills thought to be involved in comprehension. Although the analyses often differ, certain elements consistently reappear throughout the literature.

As far back as 1918, W. S. Gray presented an analysis of the skills he believed to be involved in comprehension. Though his analysis was based on a wide ranging experience in teaching reading, a familiarity with experimental studies, and much thought, it was not based on any empirical data.

Since that time others have made subjective analyses of the skills involved in comprehension, while still others have tried to analyze the skills involved by analyzing data from tests. Thus, there is much research on the tests of comprehension, and much discussion as to whether comprehension is a global skill or one made up of a hierarchy of sub skills.

While this discussion goes on constantly in the literature, another element enters the arena. Some argue that comprehension is based to a large extent on word knowledge, while others claim that even with good decoding ability and a fair knowledge of the meaning

of words, pupils cannot answer questions based upon a paragraph. So while some experts assume that identification of a word is the key to good reading, and once a child learns to identify all the words he is likely to encounter, comprehension will follow automatically, others argue that the relationship between word decoding and comprehension is not so certain.

Many of the aforementioned analyses have been used as guides in the construction of learning exercises for the teaching of reading comprehension. If, as some experts argue, comprehension is made up of several sub skills, and as others state, comprehension involves more than decoding, perhaps systematic instruction in learning exercises designed to teach the so called components of comprehension will result in improved comprehension scores. Frederick Davis (1971) stresses the need for controlled experiments to determine the effect on comprehension produced by teaching the skills which he claims underlie it.

Statement of the Problem

The purpose of this study was to investigate the effectiveness of supplementary comprehension development materials in increasing the comprehension scores of fourth grade pupils.

Hypotheses

On a fourth grade level, a combination of normal classroom basal reading instruction and supplementary comprehension development instruction will be no more effective in teaching reading comprehension than normal classroom basal reading instruction combined with vocabulary

development exercises, as measured by the Gates MacGinitie Test of comprehension.

High scoring and low scoring pupils will fare equally well with supplementary vocabulary instruction and supplementary comprehension instruction on the Gates MacGinitie Test of comprehension.

Importance of the Study

Nila Banton Smith (1969) states that the proportion of studies on comprehension is much lower than in all other areas of reading. Yet it is the area most often discussed as being the ultimate objective of reading instruction. Also Donald Cushenbery (1968) says that getting meaning from the printed page is the end product of the reading act. While there is a plethora of resources and techniques to improve word identification skills, much remains to be done in the area of comprehension.

This study will attempt to show whether concentrated instruction in several of the identified sub skills of comprehension will indeed raise the overall comprehension level of the pupil as measured on a standardized comprehension test. In other words, is it possible to break up comprehension into the various elements of its sub skills, teach these intensively, and thus improve the scores of pupils on a standardized test?

If it can be shown that the use of supplementary comprehension development exercises does indeed improve comprehension ability of pupils, and that is the admitted objective of many reading authorities,

such programs can easily be instituted in ordinary classrooms. The materials are relatively inexpensive, and do not require special training for their use.

If their use does not bring about better comprehension skills as measured by a standardized test, perhaps time and money spent on such materials could be applied to other alternatives which might produce the desired results.

Definition of Terms

Normal classroom basal instruction. That instruction normally given by the teacher in the basal readers in use in the district; namely, Macmillan, Scott-Foresman, and Harcourt, Brace, and Jovanavich.

Supplementary comprehension development instruction. Work in the Barnell and Loft Skill Booklets in the skills of Getting Facts, Getting the Main Idea, and Drawing Conclusions, Levels B through Γ, assigned on the basis of level of classroom basal instruction.

Vocabulary development exercises. Work in the Vocabulary Word Analysis Practice Cards, Durrell-Murphy Intermediate Series, Levels A, B, and C, assigned on the basis of level of classroom basal instruction.

Comprehension. Scores on the Gates MacGinitie Test of comprehension, Level D, Forms 1 and 2.

High scoring pupils. Those pupils placing in the upper 27% of all pupils when scores are placed in high to low order.

Low scoring pupils. Those pupils placing in the bottom 27%

of all pupils when scores are placed in high to low order.

Limitations of the Study

Only fourth grade pupils were used. While the study may be applicable to other pupils in other grades, it has not been tried.

The community is a typical suburban community. It does have a minority population of about 10%. Results of this study may not apply to an urban or to another type of suburban community.

The program was used in conjunction with a basal reading program. This may have had an effect upon the results.

Pupils used materials independently as a supplementary learning exercise. Perhaps active teaching of the skills might have influenced the results.

Reading achievement was measured after a period of ten weeks of instruction. Measurement after a longer period of instruction might have produced greater differences between groups.

The size of the sample might be considered another limitation. A larger sample could provide more meaningful results.

CHAPTER II

SURVEY OF THE LITERATURE

Introduction

Much reading research has been concerned with comprehension, but only those studies that have a relatively close relationship to the problem under investigation will be reported here.

Chapman (1969) described what she believes to be the three theories of comprehension.

1. The uncorrelated, or isolated skills theory, which postulates that comprehension is made up of a set of skills (or mental processes) that are learned and used independently and in any order.

2. The global-skill theory, which postulates that comprehension is a unitary ability that, in combination with errors of measurement, alone accounts for all of the variance of measurements of comprehension in reading.

3. The hierarchical skills theory, which postulates that comprehension is made up of separate but correlated skills, and that these differ in complexity because the more complex include all or parts of the simpler, or more basic ones.

Much discussion in the literature centers around these three theories. However, these discussions seem mainly to be concerned with the measurement of the skills; whether or not it is possible to measure

the skills separately, and how these separate skill measurements correlate with the total comprehension score.

In addition to considering the three theories of global skill, isolated skills and hierarchical skills, this search of the literature will also delve into the techniques used to identify the sub skills of comprehension. That is, it will deal with results of studies using multiple regression techniques, factor analysis, and various subjective analyses of the sub skills of comprehension.

A further area of interest in comprehension will be the discussion between those who feel that decoding is all that is necessary for reading, and those who feel that reading is more than decoding.

The materials, methods of teaching comprehension, and optimum time will be touched upon too, as they relate to this study.

Lastly, this review will briefly discuss the differences between high and low ability pupils, as they relate to the teaching of comprehension skills.

Current Considerations

Before getting into the discussion of Chapman's three theories of comprehension, it might be worthwhile to consider Ferfoot's (1965) attempt to organize some of the problems and research considerations in comprehension. Ferfoot states that there is too wide a variety of "labels" used by the many different experts in the field of comprehension. What is labeled "Interpretive" or "Evaluative" or "Inference" by one expert may be called something entirely different by another. Ferfoot suggests that an attempt be made to operationally

classify reading comprehension. He offers the following list as prime considerations, and it might be well to consider these as one considers the evidence presented in the literature.

1. Can we get a model of consistent terminology?
2. What comprehension abilities are identified by reading theorists?
3. What comprehension abilities are measured by reading tests?
4. What comprehension abilities are developed by reading programs as described in teachers' guides?
5. Which abilities are most important in the three areas of theory, measurement, and program?
6. How closely do reading theorists, tests, and programs agree on comprehension abilities identified and emphasis given to each?
7. What comprehension abilities have been identified by factor analysis studies?
8. How independent are abilities identified?
9. Which abilities in terms of emphasis and independence are important to measure and develop (p. 255)?

Comprehension as a Global Skill

A number of studies have been interpreted to indicate that comprehension is a unitary ability. One of these was reported by Harris (1948), who investigated the comprehension of literature. He found that the common variance of scores measuring comprehension could be explained by one factor. Variance in content from one passage to another did not generate additional factors. In a separate group of 106 men he obtained scores on seven skills judged important in understanding literature. Again the common variance in these could be fully explained by one factor, general verbal facility.

Hunt (1957) reported a study of 204 multiple choice items. Twenty-one judges classified the items in terms of six skills. Each skill was represented by 34 items. Using a sample of 370 subjects,

Hunt found that all six skills measured much the same general abilities.

Alshan (1964) investigated the skills in comprehension, by using the first 40 items in Form 2A of the Davis Reading Test. The 40 items represented five skills as shown in Table I. According to Alshan's analysis, the items did not group themselves by type. Instead, data suggested that one element and chance accounted for the results. The conclusion was drawn that all of the times in the test must measure to a considerable extent one major element in comprehension, probably general verbal facility.

In further supporting the theory of comprehension as a global skill, Traxler (1941) analyzed the Van Wagenen-Dvorak Diagnostic Tests. Traxler concluded that the sub tests measuring central thought, clearly state details, interpretation, integration of dispersed ideas, and ability to draw inferences, all seemed to be measuring closely related abilities.

Traxler also concluded that there was reasonable doubt that the separate scores yielded by each one of these sub tests contributed anything greatly different from the total reading level score. Most parts of the sub tests, he found, correlated so highly that any diagnosis based on the sub scores had little meaning.

Conant (1942) tried to answer the question as to whether there is a general reading comprehension or a reading proficiency dependent upon a number of different skills. Conant concluded after administering tests designed to measure various so called components of comprehension that probably a single factor accounted for the results.

TABLE I

FIVE COMPREHENSION SKILLS
MEASURED BY ALSHAN
USING THE DAVIS TEST

Variable	Description
1	Finding answers to questions explicitly or in paraphrase in a passage
2	Weaving together the ideas of a passage and grasping its central thought
3	Making inferences about the content of a passage and about the purpose or point of view of its author
4	Recognizing the tone, mood, and literary devices used in a passage
5	Following the structure of a passage

Also supporting the theory of comprehension as a global skill, Levine (1970) claims that the most commonly considered vital sub skills of deducing the main idea and the supporting details are not skills that can be developed and transferred from subject to subject. He goes on to state that there are skills which can be taught, but they exist in the area of word recognition, not comprehension. Those skills can be analyzed into component parts and perfected under the guidance of a teacher, because understanding is not an essential factor in their development. However, he claims this is impossible in the area of comprehension. He presents some exceedingly difficult, specialized passages from the disciplines of science, math and linguistics, each using a very specialized vocabulary. He goes on to say that the sub skills of comprehension cannot be transferred from one of these areas to another.

The only way to achieve comprehension in each area is to do quantity reading in that specific discipline. According to Levine, a grasp of the concepts and data in a body of knowledge is assured only when one has thoroughly read thousands of paragraphs in that subject. Levine claims that only through quantity reading will children achieve comprehension. (Quantity is defined as a minimum of 3,000 words daily in each subject to be studied.)

Rewards of quantity reading, he says, will be obvious when compared to the results of quantity speech. Sheer quantity (10-15 million words heard or spoken annually by all children) results in proficient speech. Quantity reading will do the same for reading, he

concludes.

Comprehension as a Set of Sub Skills

There is a great deal of confusion surrounding the theory of comprehension as a set of sub skills. Chapman has differentiated between the isolated, uncorrelated sub skills theory and the hierarchical skills theory. Davis (1971) states that his studies show that tests measuring a variety of skills involved in comprehension are positively and in most instances closely correlated. However, Davis goes on to say that these findings do not require that hierarchies be established in the sense that certain complex skills cannot be learned or performed unless a specified skill or specified skills have previously been mastered. Davis (1968) lists eight skills of comprehension among mature readers used in his uniqueness analysis. (Table 2) To measure each of the eight skills, 40 items were used. These were tried out in two parallel forms, A and B, and administered without time limit to juniors and seniors in academic high schools. Analyses were completed to determine the 24 items which best measured each of the eight skills they were intended to measure. Each group of 24 items was split in half. Eight groups of 12 items each were assembled to provide two parallel forms. These forms were then administered to nearly 1,000 juniors and seniors. Davis then analyzed the proportion of nonchance variance of each skill that is unique to it in the set of eight. Recalling word meanings showed the largest percentage of unique variance, 32%. Drawing inferences showed the second largest percentage, about 20%. Three other skills showed

TABLE 2

EIGHT SKILLS OF COMPREHENSION IN READING AMONG MATURE READERS USED BY DAVIS IN HIS UNIQUENESS ANALYSIS

Skill Number	Skill
1	Recalling word meanings
2	Finding answers to questions answered explicitly or merely in paraphrase in the content
3	Weaving together ideas in the content
4	Drawing inferences from the content
5	Recognizing a writer's purpose, attitude, tone, and mood
6	Drawing inferences about the meaning of a word from context
7	Identifying a writer's technique
8	Following the structure of a passage

substantial percentages of unique variance. From this data Davis concluded that comprehension in reading among mature readers is not a unitary mental skill. It is, he judged, a composite of at least five or six underlying mental skills. Whether there is a hierarchy of these skills by which one or more must be available to the reader before he can use the others is not shown by the data.

On the other hand, Nila Banton Smith (1969) believes that there is a hierarchy of skills in comprehension. She states that the broad often used categories of "literal" and "critical" are too large catch all phrases. Instead she offers four categories with some description of what they include.

First, Literal Comprehension is defined as the skill of getting primary, direct, literal meaning. This is the level most used by teachers. As the next level, Interpretation is concerned with those meanings not directly stated in the text. Under this category are listed:

a. supplying additional meaning by "reading between the lines"
b. making generalizations
c. cause and effect
d. anticipating endings
e. making comparisons
f. sensing motives
g. discovering relationships (p. 255).

Next higher in the organizational pattern, is Critical Reading, whereby the reader evaluates and passes personal judgment on the quality, accuracy, and truthfulness of what is read. Highest in the hierarchy is Creative Reading in which the pupil goes beyond the text to seek out and express new ideas, gain additional insight, and

do actual problem solving. Teachers must know and recognize these processes if they are to develop them in children.

Caskey (1970) also believes that comprehension is developed on different levels. On the simpler levels he places such skills as the recall of facts, and the ability to make an accurate summary of the passage. Covington (1967) referred to this level as "passive understanding". Caskey thus believes that grasp of the main idea and specific details is essential before more advanced skills can be used. Once these skills are mastered, he envisions another level, that in which the pupil is able to make evaluative judgments and inferences about what is not directly stated.

Cushenbery (1968) sees comprehension as encompassing such abilities as:

1. Reading for details
2. Grasping the main idea
3. Differentiating between fact and opinion (p. 101).

Pupils must receive direct and sequential training in each of these areas. If the teacher questions only one area, the pupil will believe that effective comprehension consists of only that area. Cushenbery offers several principles to be followed in the teaching of comprehension skills.

1. Materials must be at the child's instructional level. Those which are too difficult frustrate, while those which are too easy fail to challenge.
2. Reading purposes must be developed with the pupil, so that he knows if the reading is being done to gain details, a main idea, or significant generalization.
3. Lessons must be well developed sequentially.
4. A reading inventory or other informal device should be

> employed to give knowledge of each pupil's strengths and limitations in each area of comprehension (p. 102).

After proposing that there are two levels of comprehension, literal and inferential, Feinman (1972) conducted a study to show that they exist in hierarchy, with literal comprehension providing a foundation for inferential. She hypothesized that in a test of reading comprehension, items requiring inference will be more difficult than items requiring literal comprehension. She concluded that:

1. Literal comprehension is a necessary condition for inferential comprehension.

2. Literal comprehension is not a sufficient condition for inferential comprehension.

These conclusions were based upon her study with 2nd and 3rd grade children in which they were presented with reading passages using a controlled vocabulary, and tested with six questions, three literal and three inferential. One might question the adequacy of the test in this experiment.

Feder (1938) also concluded that the tasks of answering factual questions and of making inferences call to a considerable extent on quite different fundamental skills in comprehension. Feder's study used 99 college sophomores. He tested them with six measures, two of which measured ability to answer factual questions, two measured ability to make inferences, one measured appreciation of the material read, and the last measured speed of comprehension of easy material. Feder used factor analysis and concluded that the

skill of inference is different from that of merely answering factual questions. One might question his results, based on the correlations shown in Table 3. Question 3, drawing inferences, has approximately the same correlation with question 4, acquiring facts (.48), as it has with question 5, drawing inferences (.45). If the drawing inferences question correlates nearly the same with acquiring facts as it does with the other question on drawing inferences, how did Feder arrive at his conclusions?

Holmes (1954) attempted to discover the factors which underlie power of reading (defined as ability to comprehend difficult material with generous time limits) and speed of reading (defined as rate of comprehension of easy material). Holmes' findings showed that level of comprehension seemed to be associated with level of vocabulary, general reasoning facility and verbal relationships. Although Davis (1971) found fault with the tests used by Holmes and with the size of the sample (n=126), he said that efforts to improve a pupil's ability in these areas may be helpful in reading instruction.

Singer (1965) did a study similar to Holmes' , but he used 927 pupils in grades 3-6. Singer found word knowledge and speed and accuracy of word perception to be the only variables of importance. Davis (1971) conjectures that perhaps this is because the more specific skills in comprehension were not the primary functions measured by any of the independent variables. (Singer was measuring Speed of Comprehension.)

TABLE 3

INTERCORRELATIONS OF READING TESTS
REPORTED BY FEDER.

Variables	1	2	3	4	5	6
1	-	.30	.24	.44	.25	.27
2	.30	-	.29	.36	.21	.22
3	.24	.29	-	.48	.45	.32
4	.44	.36	.48	-	.41	.25
5	.25	.21	.45	.41	-	.10
6	.27	.22	.32	.25	.10	-

1. Acquiring facts
2. Appreciating a passage
3. Drawing inferences
4. Acquiring facts
5. Drawing inferences
6. Speed of reading easy material

Lennon (1962) after a detailed search of the literature, shows a lack of consistency in the literature with respect to whether or not comprehension consists of one general ability or is made up of several specific sub skills. However, he comes to the conclusion that there are four components of reading comprehension. These consist of a general verbal factor, the comprehension of explicitly or literally stated material, the comprehension of implicitly stated material, and a factor dealing with appreciation.

Lennon explains the verbal factor as one which deals with word knowledge. Since many investigations are noted by Lennon as showing that vocabulary is substantially related to all other measures of reading ability, he states:

> Every investigation shows....Extensive word mastery, or fluency in handling words is almost a prerequisite to attainment of high competence in any type of reading skill (p. 235).

After detailing the explicit component as one which deals with literal meaning and ability to follow directions, he goes on to explain the implicit factor.

> Research does support the belief that this type of reading ability can be differentiated from ability to comprehend what is explicitly stated. Implicit comprehension presupposes ability to understand explicit or literal (p. 235).

Lennon then draws the conclusion that it is impossible to develop a perfect instrument to test comprehension because of the nature of reading, and the fact that each individual brings to the task different experiences and background.

However, he concludes that if these abilities are sub-

stantially related and do overlap as the literature shows, then efforts to improve one skill should carry over to the improvement of other skills.

> Nothing in research reports leads us to believe that it is fruitless....to prepare exercises calculated to develop power in these several skills and even to use these analyses as bases for developing tests (p. 236).

Decoding versus Skills in Comprehension

Some reading experts assume that identification of a word is the key to good reading. They say that once a child learns to identify all the words he is likely to encounter, comprehension will follow automatically. Others argue that the relationship between identification of words and comprehension is rather tenuous. Cromer (1970) states that poor identification is correlated with poor comprehension, but there is only a minimal relationship between good identification and good comprehension.

Cromer states that some poor readers have the skill to read aloud and say all the words correctly, yet do not organize their reading input into meaningful units, such as phrases. In so doing they lose that part of the meaning which is carried by combinations of words, and their comprehension is consequently impaired.

Steiner, Wiener, and Cromer (1971) hypothesize, that if the problem of poor readers is primarily a failure to extract contextual clues, giving them supplementary contextual information should lower the identification error rates. They therefore read summaries of stories to pupils before requiring the pupils to read the stories.

Results did not support the notion that poor readers fail to use contextual information because they cannot pick it out. They cannot use the contextual clues even when they are presented with them. Such readers identify words as if they are unrelated and unaffected by syntax. They respond to words as isolated items in a series. Steiner, Wiener, and Cromer (1971) go on to say that a further assumption that there is a direct transfer from auditory to graphic language may be at the root of the problem. There are many ways in which auditory and graphic language differ. Speech uses stress, pause, and intonation as essential guides. Graphic language has no equivalent devices for signaling syntactic and certain semantic functions. These comprehension problems will not be solved, they say, until the missing structure signals in graphic language are recognized.

Allen (1964) also says that the ability to comprehend a complicated sentence and to read it intelligently depends upon the reader's ability to analyze its syntactical structure accurately. Even seemingly simple material may have potentially confusing elements. Ability to recognize elements within a sentence and the relation between such units may lead to better comprehension.

The poor reader who is merely word calling often produces unrealistic or meaningless statements according to Cohn (1972). The poor readers leaves these uncorrected, while the effective reader reexamines the paragraph since it seems at variance with what he already knows. This internal ability to steer himself away

from what he thought the writer said to what the writer actually did say assists the good reader. An attempt to consciously develop and promote this sensitivity in poorer readers will result in improved comprehension.

Educators maintain that the ultimate objective of reading instruction is to enable the child to understand what he reads, not just to call words. Yet Bormuth (1968) in a study of student's ability to comprehend at different levels, primary, intermediate, junior high, and high school, found that children were not able to read their instructional materials well enough to gain much information from them until they reached high school. Even then, large proportions of materials were incomprehensible to a large proportion of the students. Bormuth also theorizes that the improved ability of high school students may have resulted merely because the less able students have dropped out and are not there to pull down average performance.

A detailed analysis of the comprehension skills showed that many fourth grade children were unable to show comprehension of the simplest structures by which language signals information. Bormuth goes on to say that an analysis of materials used to teach comprehension and of the curriculum guides and textbooks which instruct teachers in how to teach skills tend to suggest that there is no clear concept of what skills are to be taught. Furthermore, teaching procedures are described in only the vaguest terms. Although he does not reject or disapprove of present procedures for teaching

comprehension, Bormuth voices grave doubts about their efficacy. They definitely do not produce sufficient results to enable children to profit much from their reading, he says. Bormuth's work may lead us back to the questions asked by Ferfoot at the beginning of this search of the literature.

Mattleman (1970) expresses much the same thinking. The child "reads" and "knows" all the words but lacks understanding of the material. Good readers use all kinds of clues, while less facile readers fail to use clues as readily. Teachers need to bridge this meaning gap. Mattleman suggests reading short stories to these children and then asking them to place the material in sequence, and to answer inferential type questions based on it. Other suggestions include activities of listening for details and using context clues. Mattleman suggests the teaching of comprehension in all content areas.

Fagan (1971) also feels that mere word identification is not enough to provide comprehension. Children must be able to understand the language structures by which ideas, information, and concepts are conveyed. Using Chomsky's theory of transformational grammar, Fagan undertook a study to see if the reading comprehension of fourth, fifth, and sixth grade pupils was affected by the number and/or types of transformations in the language of the passages they were requested to read. Findings showed that sentence difficulty was more dependent upon the presence and difficulty of transformations than was the difficulty of paragraphs. This was explained by

the redundancy of the language, for what is missed in one sentence may be acquired in the rest of the passage. Contrary to earlier studies, the number of transformations within a sentence did not affect the comprehension difficulty of the sentence. The sample included 440 pupils. Of the forty three transformations identified, appositives, pronouns, negatives, gerunds, and common deletions, seemed to be most difficult to comprehend.

Also stating that linguistics can help, Lefevre (1964) says that the child who learns sentence function order in familiar sentence patterns will not become a word caller or a reader of disconnected structural fragments; rather, he will develop a strong sentence sense.

Along the same lines, Allen (1964) believes that ability to comprehend a complicated sentence and to read it intelligently depends upon the reader's ability to analyze its syntactical structure accurately. Even seemingly simple material may have potentially confusing elements. Ability to recognize units within a sentence and the relation between such units may lead to better comprehension.

In a study done with fourth, fifth, and sixth grade children, Robertson (1968) found that they had poor comprehension of connective words. He recommended systematic training in the understanding of connectives. Lefevre (1964) also says that the reading of clause markers (if, that, now, after, as, etc.) is a first requirement for effective comprehension.

Use of Supplementary Materials to Teach Comprehension

Karlin (1967) draws together a number of research studies to support his thesis that the mixed findings of research on the use of materials may reflect differences brought about by the ways the materials have been used rather than by the materials themselves. Karlin also cites a study by Jones (1961) who found no significant differences between fourth grade groups using a reading lab and those who did not. Both groups made significant gains over a five month period. Sartain (1961) reported no differences in progress between third grade groups who used and did not use workbooks. On the other hand Docter (1962) reported gains in favor of the workbook groups in grades two and three, superior gains for non-workbook groups in grades one and four, and no differences in grades five and six. These mixed results would seem to support Karlin's statement that the way in which the materials are used may be more significant than the materials themselves.

However, Karlin does go on to cite three other studies by Miller (1963), Ungaro (1965) and Sister Mary Edward (1964), who all found that the introduction of supplementary activities and materials tended to produce better readers.

Jumping up to the college level, Dubois (1969) conducted a study using three groups. Group A used subject matter type materials, Group B used general reading materials, and Group C received no specific reading instruction. He was trying to determine: 1. to what degree general reading materials assist students in learning to read

and comprehend, 2. if instruction in textbook reading skills and practice with subject matter materials will significantly improve ability to read and comprehend textbooks.

The study lasted thirteen weeks with groups receiving 39 periods of instruction of 50 minutes each. Using three different tests, the Cloze Test, the Diagnostic Reading Test, and the Iowa Silent Reading Test, he determined the following: both experimental groups made significantly greater gains than the control group. There were, however, no significant differences between the two experimental groups. Thus one might conclude that the type of material used made no difference between the two experimental groups, whereas the control group, receiving no specific instruction made significantly lower gains.

Significance of Time Spent

Again on the college level, but turning to the significance of time spent, Pauk (1965) compared two different college reading programs. Group A consisted of students enrolled in a six-session study skills course which ignored rate and concentrated on study skills. Group B was enrolled in a 14 session course with the first two sessions devoted to speed reading, the next six sessions on study skills (the same as Group A) followed by six more sessions dealing with the various aspects of comprehension.

Both groups made some improvement, but the six session group made three times the gains made by the 14 session group. Pauk concluded that preoccupation with rate hindered Group B. Thus better

results were achieved in a shorter period of time by concentrating on one set of skills only.

Relating gains to time spent is also dealt with by Hicks, et al (1968). This study used 92 third grade and 78 fourth grade remedial reading pupils. They were pre and posttested with the Diagnostic Reading Tests, Pupil Progress Series, administered during the first and last months of school. Pupils were divided into groups receiving two, three, and four ½ hour sessions per week. The number of reading sessions showed a significant effect on the improvement of the third grade students. No significant effect, however, was made by the number of sessions on the fourth grade pupils. A suggested reason for the difference was the age or "readiness" accounting for the differences in results. To further justify this conclusion a study by Jarvis (1965) was cited in which lengthening the time per day for formal instruction had no significant effect on reading gain of fourth graders. One finds these strong contrasts between third and fourth graders hard to accept, since many pupils are so close in age (young fourth graders--older third graders, etc.) One would like to look into other factors which may have affected the results.

An interesting study with findings which might relate to the optimum length of instruction was done by McDonald and Nacke (1969). They divided the 650 students in the ninth grade into four levels: accelerated, developmental, corrective and clinical. Students were given intensive reading skill work following extensive diagnosis.

They were pre and posttested on the Davis Test. One of the questions raised by this study revolves around the findings that the first semester results were better than the second semester results. This again poses the question about optimum duration of instruction. Is there a point after which gains taper off? Should programs concentrate on one area of skill development and then go on to something else?

Differences between High and Low Ability Pupils

When dealing with comprehension, much is said about I.Q. and how it relates to children's comprehension abilities. Ray and Martin (1967) using all students enrolled in college reading improvement programs, and testing pre and post with Nelson-Denny Reading Tests, showed no significant differences between mean gains of students above and below the median. They claim that with small group instruction, and adjustments in teaching for individual differences, there are no differences between gains made by high and low I.Q. groups.

Caskey (1970) suggests that teachers not limit the teaching of comprehension skills to high I.Q. pupils. The important factor is making sure the reading materials are on the child's level. He will then be able to do critical as well as literal comprehension.

Achievement in higher level comprehension skills was not limited to gifted pupils. According to Wolf et al (1968) the nature of the stimulation and guidance received are more important factors. Therefore, the teacher is important in determining the depth of the

thinking. Covington (1967) agrees saying that pupils with lower I.Q. (below 100) are not handicapped in creative understanding. If the pupil has the reading skill necessary for dealing with material on a particular level, the comprehension skills will not be so much dependent upon his intellectual ability as upon the kind of instructional assistance given.

In a study of intermediate grade pupils' ability to distinguish between fact and opinion, Davis (1969) found that those pupils reading above grade level were more capable of distinguishing differences than those at grade level or below. There was no significant difference between those at grade level and below. From this, Davis concludes that the belief that slow learners will not profit from training in thinking skills is unfounded. They can learn as well as the average students, though above average students do better.

The teacher must, however, help the students by asking the types of questions that require inferences, judgments, evaluations, etc.,if she hopes to develop critical reading abilities.

Summary

While the opposing points of view as to what constitutes comprehension are presented here in the literature search, there seems to be no opposition to the idea that comprehension can be improved in students. In fact, many experts, (Smith, 1969; Caskey, 1970 ; Cushenbery, 1968; Feinman, 1972) recommend that teachers make a conscious effort to move the level of comprehension in their pupils above the simple literal level.

One also notes Bormuth's (1968) recommendation that pupils be aided in comprehending the content materials. With so much emphasis on decoding, and then on reading the materials presented in basals, pupils often lack the skill necessary to deal with the content materials of the sciences and social studies as they reach junior and senior high school.

Hopefully, work in the comprehension development materials used in this study will provide improvement in both of these areas, the reading of content materials, and reading for other than mere literal recall.

Also, while the experts argue as to whether it is or is not possible to measure the separate skills of comprehension, this study will focus on whether or not it is possible to give instructional exercises to pupils in the so called sub skills of comprehension, and then measure an overall improvement in the total comprehension score.

CHAPTER III

PROCEDURE

In order to find out if the comprehension level of a pupil improves with systematic instruction in the so called sub skills of comprehension, Experimental Group I was given work in the Barnell and Loft comprehension development exercises for a period of ten weeks, while the Control Group worked for a comparable period of time in Vocabulary development exercises. The reading comprehension scores of the two groups were then compared.

This chapter describes the population used in the study, the procedures and testing that were followed, and the way in which the collected data were statistically analyzed.

The Population

Subjects. The population consisted of the students in three fourth grade classrooms in a fourth grade school located in a middle class suburban community in central New Jersey. Minority population in the community and in the school averages about ten percent.

Total population used in the study were 66 pupils. Of the 33 pupils in the Experimental Group, 14 were girls and 19 were boys. Of the 33 in the Control Group, 15 were girls and 18 were boys.

Teachers. Of the three teachers participating in the study,

two hold Bachelor's Degrees, while one has a Master's Degree. All three have ten or more years of teaching experience.

Procedure Followed

All pupils in three regular classes on a fourth grade level (approximately 22 pupils in each class) participated in the experiment. Pupils received regular instruction in the basal reader program using the same Macmillan, Scott-Foresman, and Harcourt, Brace and Jovanovich materials in all classes, with different basals used for different ability level groups. Pupils were pretested with the Gates MacGinitie Comprehension Test, Level D, Form B at the outset of the experiment. Pupils in each class were randomly assigned to either Treatment 1, supplementary vocabulary word analysis practice cards, or Treatment 2, supplementary comprehension development exercises, Levels B-E of Getting the Facts, Getting the Main Idea, or Drawing Conclusions, of the Barnell-Loft Series. According to the publishers Level B is on a second grade level, C on a third, D on a fourth, and E on a fifth grade level.

One session was spent with each class introducing pupils to the materials and procedures. Pupils were assigned exercises on their instructional level according to level of basal instruction. Each teacher had the class divided in half with each half either in Treatment 1 or Treatment 2, to control the teacher variable. Pupils worked in the supplementary exercises during "seat work" time, averaging about 20-30 minutes per day. Answer keys were provided for self checking. Scores were then recorded on the appropriate

chart (see Appendix) for either vocabulary or comprehension. Errors were corrected and the corrected scores were also recorded.

As pupils completed one booklet or set of vocabulary cards, the teacher provided a spot check of the answer sheet to make sure all was being done properly, and then assigned the next appropriate materials. An attempt was made to have pupils move through a level going from Getting Facts to Getting the Main Idea and then to Drawing Conclusions. Following this pupils would move up to the next level again at Getting Facts. With vocabulary work, pupils also moved up from levels A through C as work was completed.

Experiment continued for a period of ten weeks, after which a posttest was administered, The Gates MacGinitie Comprehension Test, Level D, Form 1.

Selection of Tests

The Gates MacGinite Tests are regularly used within the school district where the experiment took place. The test is relatively short, 25 minutes for the comprehension section, and simple to administer. It covers grades 4-6. This proved to be an advantage for this population, since many pupils scored in the upper ranges. Had the experiment been conducted with sixth graders this test would not have provided a high enough range for this population. In a very few cases, on the other hand, the test did not provide enough range at the lower end.

In examining reviews in Buros (1965), George Spache, reviewing the Gates Survey which preceded the Gates MacGinitie Level D

test, says that the use of cloze procedure is a valid reading measure. He claims that the questions require a large amount of inferential thinking. While this is a legitimate type of question, it is one which is not stressed in the average classroom. However, in this experiment, pupils are exposed to inferential questions, and one might consider this point as an asset.

In the newest issue of Buros (1972), Van Roekel states that the development of Survey D and E in the Gates MacGinitie tests, has eliminated the most severe limitation of the Gates Reading Survey by reducing the grade range covered in a single test. Survey D, intended for grades 4-6, and Survey E for grades 7-9 combine to serve a grade range 1.5 less than that formerly served by the Gates Reading Survey alone. The tests do not differ materially in content and structure from the predecessor. The comprehension test involves short paragraphs of increasing difficulty in which comprehension is measured by asking the pupil to choose appropriate words to fit two or three omissions in the paragraph.

Level manuals and the technical manual are quite complete and easy to follow. Standardization appears to have been rather carefully done. Alternate-form and split-half reliability are reported. For Survey D, Comprehension, Alternate Form Reliability is reported at .83, and Split Half Reliability is reported at .94 in the Technical Manual.

Van Roekel goes on to say that the Gates MacGinitie tests reflect a marked improvement over their predecessors. The tests

function best as survey tests rather than diagnostic tests.

Another reviewer, William Powell (1972) agrees on this point, and states that the tests would be of limited value if information about specific subskills were needed. Powell also goes on to say that an improvement has been made by breaking the old Gates Survey down into different levels, thus reducing the range measured.

Administration of Tests

At the outset of the experiment, in early November, the Gates MacGinitie Comprehension Test, Level D, Form B, was administered to all pupils in both the experimental and control groups, on the same day by this investigator.

In the end of January, after ten weeks of work in the materials, pupils were again tested, this time with Form A of the Gates MacGinitie Comprehension Test, Level D.

All tests were scored by this investigator. Copies of tests used will be found in the Appendix.

Experimental Design

The experimental design used was the pretest posttest control group design that can be illustrated as follows:

$$R \quad O_1 \quad X_1 \quad O_2$$
$$R \quad O_3 \quad X_2 \quad O_4$$

The comparisons were between the experimental group 1, using supplementary comprehension development materials, and experimental group 2, using the vocabulary development exercises.

Statistical Analysis

The main statistical analysis was concerned with comparisons of mean scores between the two treatment groups. Statistical significance was evaluated by the t test, with the .05 level established as the acceptable level of statistical significance. In addition to comparing the means of the total groups, additional analyses were made comparing the means of both groups in the top and bottom 27% of pupils tested.

CHAPTER IV

RESULTS AND DISCUSSION

This chapter presents an analysis and discussion of the data, as it applies to the questions raised in Chapter I.

Pretests

Comparison of total groups. Table 4 indicates the results of the pretests in comprehension. With a mean of 28.61 for the supplementary comprehension group, and a mean of 29.12 for the supplementary vocabulary group, the mean difference of .51 showed no statistical difference between the groups at the beginning of the study.

Comparison of high scoring pupils. As depicted in Table 5, the mean for the supplementary comprehension group was 40.89 while the mean for the supplementary vocabulary group was 42.78. This mean difference of 1.89, while favoring the vocabulary group, was not sufficient to be statistically significant at the .05 level.

Comparison of low scoring pupils. Pretest comprehension scores, as shown by Table 6 were a mean of 16.78 for the supplementary comprehension group, and a mean of 15.33 for the supplementary vocabulary group. The mean difference of 1.45 was again, not statistically significant at the .05 level.

Posttests

Comparison of total groups. The main question was concerned with whether those pupils using the comprehension development exercises in the so-called subskills of comprehension would have greater achievement in comprehension on a standardized comprehension test than those using the vocabulary exercises.

As noted in Table 7, the mean score for the comprehension trained pupils was 34.6 compared to a mean score of 33.8 for those pupils using the vocabulary exercises. The difference between the means of .51 was not sufficient to indicate statistical significance at the .05 level.

Comparison of high scoring pupils. In studying the means of the high scoring pupils, those in the top 27% of all pupils who took the test in this sample, one might try to note a trend there, for the comprehension pupils achieved a mean of 44.8 compared to a mean of 42.3 for the vocabulary pupils. As shown in Table 8, this resulted in a difference between the means of 2.5. Upon further study of Table 8, however, it can be noted that this difference between the means was inadequate to show statistical significance at the .05 level.

Comparison of low scoring pupils. In an analysis of the difference between the means of the low scoring pupils, those in the bottom 27% of all pupils who took the test in this sample, no statistical significance could be established at the .05 level. The comprehension pupils scored a mean of 23.88 compared to a mean of

22.55 for the vocabulary pupils, which made a difference between the means of 1.33 as shown in Table 9.

Discussion

Since the observed value of t is less than the .05 level of probability, it must be concluded that there is no significant difference between the means of the two groups. Therefore, the null hypotheses are supported.

On a fourth grade level, a combination of normal classroom basal reading instruction and supplementary comprehension development instruction will be no more effective in teaching reading comprehension than normal classroom basal reading instruction combined with vocabulary development exercises, as measured by the Gates MacGinitie Test of comprehension.

High scoring and low scoring pupils will fare equally well with supplementary vocabulary instruction and supplementary comprehension instruction on the Gates MacGinitie Test of comprehension.

There are several possible interpretations of the results. One interpretation could support the claim that it is not enough to simply have pupils work in the exercises independently. Actual instruction by the teachers in the skills might have produced different results. The results could also be interpreted as supporting the global concept of comprehension, with vocabulary or other specific comprehension instruction offering equal benefits.

It is also possible that certain materials work better with certain pupils, though no firm conclusions can be drawn from the

evidence here.

Comparison with the Review of the Literature

Results of this experiment would seem to support the viewpoint expressed by several different authorities in the review of the literature.

Holmes (1954) stated that the level of comprehension seemed to be associated with the level of vocabulary, general reasoning, and verbal relationships. Singer (1965) also found word knowledge to be an important variable, though he was measuring speed of comprehension.

If comprehension is a global skill as (Hunt, 1957) (Alshan, 1964) declared in the literature review, and a comprehension test does measure only one major element, a general verbal facility, then supplementary work using vocabulary or specific comprehension development exercises may have the same effect.

Since the results of this experiment indicate statistically equal improvement for both groups, they lend support to this view, as opposed to the hierarchial view of subskills also discussed in the literature (Smith, 1969), (Cushenbery, 1968), (Caskey, 1970), (Feinman, 1972) (Feder, 1938).

Those pupils working at the subskills of getting the facts, getting the main idea, and making inferences, made no better comprehension scores than those working at the vocabulary exercises.

However, several important factors cloud the issue. All pupils received regular basal instruction. Thus, all were exposed to varying skills as taught in the basal readers, plus instruction

in all other aspects of reading connected with the regular fourth grade curriculum. Perhaps this work had the major effect, and overcame any differences which might be attributable to either of the supplementary devices employed in this study. For that instruction involved by far the greatest portion of the pupil's day.

Furthermore, the skills of getting the facts, getting the main idea, and making inferences were not directly taught by the teacher. Pupils were exposed to them, worked at them, and corrected their own errors. As stated by Karlin (1967), many differences in the research can be attributed to the way in which materials have been used, rather than to the materials themselves.

As for those in the literature who argue that comprehension is more than word identification (Cromer, 1970), (Allen, 1964), (Mattleman, 1970), and (Fagan, 1971), results of this experiment appear to refute their argument. Those pupils who worked in vocabulary exercises involving word identification and meaning did as well as those working in the actual comprehension subskills.

Lennon (1962, p. 235) as quoted in the literature, has claimed that word mastery is a prerequisite for good comprehension.

However, once again, the factors of basal instruction and independent work in the materials as opposed to direct instruction in them, should be taken into account.

TABLE 4

PRETEST SCORES OF SUPPLEMENTARY COMPREHENSION AND SUPPLEMENTARY VOCABULARY GROUPS ON THE GATES MACGINITIE COMPREHENSION TEST LEVEL D, FORM B

	N	Mean	S.D.	Mean difference	t	Significance
Supplementary Comprehension training Group	33	28.61	9.62	.51	.20	Not Significant
Supplementary Vocabulary training Group	33	29.12	10.98			

TABLE 5

PRETEST SCORES OF TOP 27% OF STUDENTS ON THE GATES MACGINITIE TEST, LEVEL D, FORM B

	N	Mean	S.D.	Mean difference	t	Significance
Supplementary Comprehension training Group	9	40.89	3.62	1.89	1.05	Not Significant
Supplementary Vocabulary training Group	9	42.78	4.02			

TABLE 6

PRETEST SCORES OF BOTTOM 27% OF STUDENTS ON THE GATES MACGINITIE TEST, LEVEL D, FORM B

	N	Mean	S.D.	Mean difference	t	Significance
Supplementary Comprehension training Group	9	16.78	3.3	1.45	.79	Not Significant
Supplementary Vocabulary training Group	9	15.33	4.45			

TABLE 7

POSTTEST SCORES OF SUPPLEMENTARY COMPREHENSION AND SUPPLEMENTARY VOCABULARY GROUPS ON THE GATES MACGINITIE COMPREHENSION TEST LEVEL D, FORM A

	N	Mean	S.D.	Mean difference	t	Significance
Supplementary Comprehension training Group	33	34.36	8.85	.51	.23	Not Significant
Supplementary Vocabulary training Group	33	33.82	9.99			

TABLE 8

POSTTEST SCORES OF TOP 27% OF STUDENTS ON THE GATES MACGINITIE TEST, LEVEL D, FORM A

	N	Mean	S.D.	Mean difference	t	Significance
Supplementary Comprehension training Group	9	44.8	2.32	2.5	1.02	Not Significant
Supplementary Vocabulary training Group	9	42.3	6.96			

TABLE 9

POSTTEST SCORES OF BOTTOM 27% OF STUDENTS ON THE GATES MACGINITIE TEST, LEVEL D, FORM A

	N	Mean	S.D.	Mean difference	t	Significance
Supplementary Comprehension training Group	9	23.88	5.08	1.33	.49	Not Significant
Supplementary Vocabulary training Group	9	22.55	6.43			

CHAPTER V

SUMMARY AND CONCLUSIONS

This chapter summarizes the present study, draws conclusions from the research results, and suggests areas for further study.

Summary

This study was concerned with whether or not supplementary work in the so called sub skills of comprehension would increase the overall comprehension level of pupils more than supplementary work with vocabulary development exercises.

The subjects were 66 pupils in three fourth grade classes in a middle-class suburban community in central New Jersey.

To eliminate the teacher variable, within each class, half of the pupils were randomly assigned to each group. All pupils in both groups spent equal time (approximately 20-30 minutes per day) working at the exercises independently during "seat work" time, while the teacher conducted the regular basal reading instruction.

Pretests and posttests were administered using alternate forms of the Gates MacGinitie Comprehension Test Level D.

The main statistical analysis concerned comparison of mean scores for both groups. Statistical significance was evaluated by the t test. Also analyzed were comprehension achievement of the top 27% and the bottom 27% of pupils tested.

All analyses showed no statistical significance at the .05 level between the means of the supplementary comprehension group and the supplementary vocabulary group. Also no statistical significance could be established between the means of the high scoring pupils nor between the means of the low scoring pupils.

Conclusions

Based on the findings of this study, and subject to the limitations of the size and nature of the population used, the following conclusions may be drawn:

1. The use of supplementary comprehension development exercises of the Barnell-Loft type does not increase comprehension on the Gates MacGinitie Comprehension Test more than the use of vocabulary development exercises of the Durrell-Murphy Intermediate Series type.

2. Though high scoring pupils seemed to profit more from the comprehension development exercises, statistical analysis showed no significant difference in their scores when compared with the scores of high scoring pupils using the vocabulary exercises.

3. Low scoring pupils profited equally well from both the supplementary comprehension development and supplementary vocabulary development exercises when the means were compared statistically using the t test with a significance level of .05.

Areas for Further Study

1. It would be desirable to conduct a study to determine if the comprehension achievement would increase significantly if the

subskills were taught directly to a group by the teacher, rather than used in independent "seat work" fashion.

2. It is also suggested that a study be conducted in the same way as the one herein described, but without a basal reading program. Thus, more time could be spent on the exercises, and the results would be free of basal interference.

3. Another area for study would be to determine if the comprehension achievement would improve equally well with one group using the supplementary comprehension development exercises, and another group doing supplementary free reading.

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APPENDIX I

GATES MACGINITIE READING TEST

SURVEY D, FORM A

APPENDIX II

GATES MACGINITIE READING TEST

SURVEY D, FORM B

APPENDIX III

VOCABULARY AND COMPREHENSION RECORD FORMS

Name _____ Date _____ Teacher _____

Skill COMPREHENSION Level _____

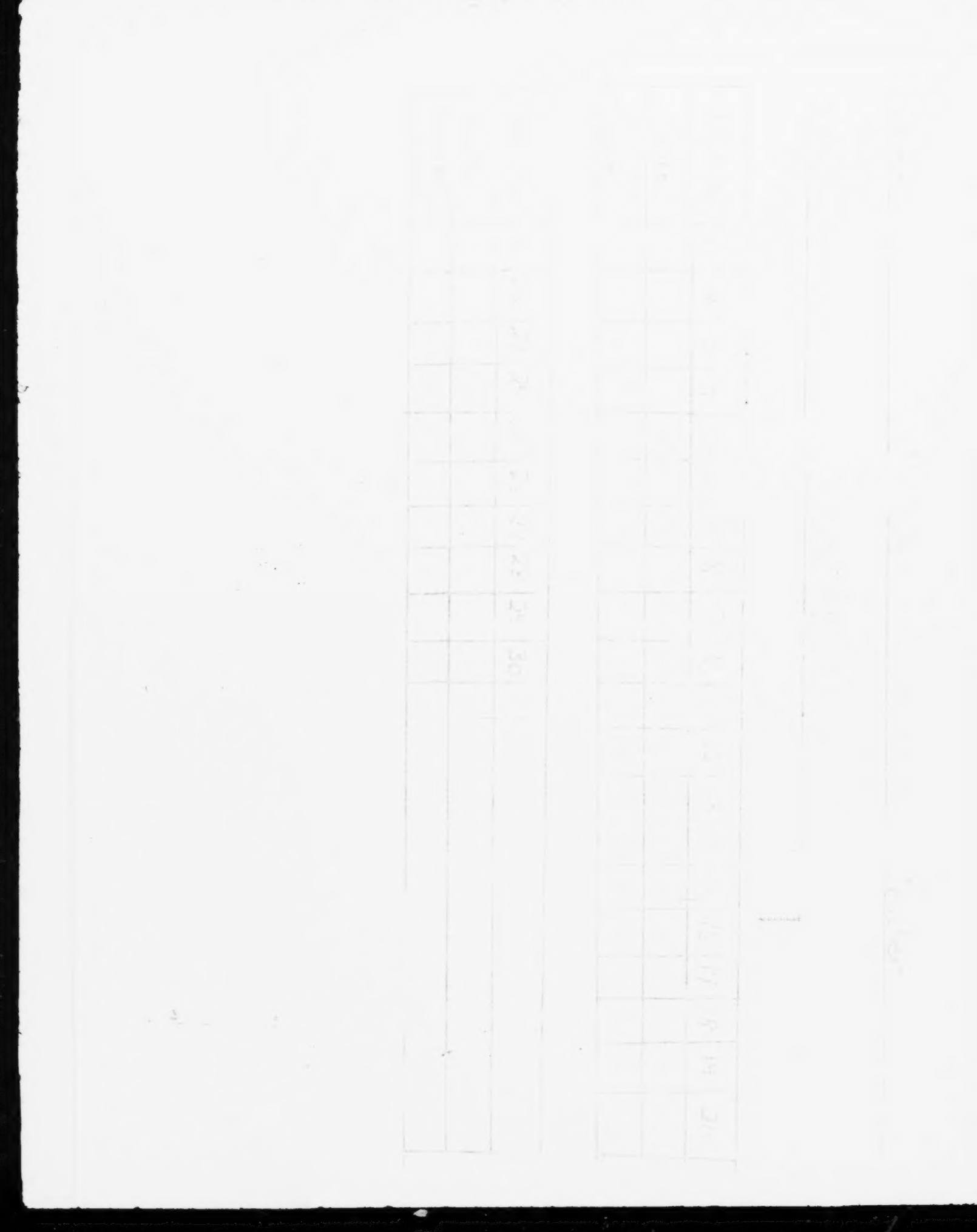
Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Score																									
Corrected Score																									

Skill _____ Level _____

Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Score																									
Corrected Score																									

Skill _____ Level _____

Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Score																									
Corrected Score																									



THE USE OF COMPREHENSION DEVELOPMENT MATERIALS FOR IMPROVING COMPREHENSION ACHIEVEMENT WITH FOURTH GRADE STUDENTS

AN ABSTRACT OF A THESIS

SUBMITTED TO THE FACULTY

OF THE GRADUATE SCHOOL OF EDUCATION

OF

RUTGERS UNIVERSITY

THE STATE UNIVERSITY OF NEW JERSEY

BY

MILDRED GOLDMAN

IN PARTIAL FULFILLMENT OF THE

REQUIREMENTS FOR THE DEGREE

OF

MASTER OF EDUCATION

NEW BRUNSWICK, NEW JERSEY

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ABSTRACT

The present study was designed to investigate the use of comprehension development materials in the improvement of comprehension achievement with fourth grade pupils. The study compared comprehension achievement between pupils using the Barnell-Loft materials in the so-called subskills of comprehension; namely, getting the facts, getting the main idea, and making inferences, with comprehension achievement of pupils using vocabulary development materials from the Durrell-Murphy Vocabulary Word Analysis Practice Cards.

Subjects were 66 pupils in the fourth grade in a middle class community in central New Jersey. Within each class, subjects were randomly assigned to either the vocabulary or the comprehension group. All pupils spent equal time, approximately 20-30 minutes, per day, on the supplementary exercises, while the teacher conducted the regular basal instruction.

Pretests with the Gates MacGinitie Comprehension Test Level D indicated no significant differences between groups before the training.

Posttests with the alternate form of the Gates MacGinitie Comprehension Test, after ten weeks of work in the materials, again showed no statistical significance between the mean scores of the groups in comprehension achievement.

It was concluded, on the basis of the research results, that pupils gain equally well in comprehension, as measured by a standard-

ized test, when given supplementary work in the subskills of comprehension or in vocabulary development.

COURSE WORK FOR MASTER'S DEGREE IN READING

Courses taken at Rutger's University

Fall, 1970-1971		Instructor
320:561	Foundations of Reading Instruction	Dr. Fry Dr. Mountain
Spring, 1971		
299:564	Remedial Reading	Dr. Fry
299:565	Laboratory in Remedial Reading	Mrs. Kimberly
Fall, 1971-1972		
290:513	Introduction to Early and Middle Years of Childhood	Dr. Arnold
610:581	Reading Materials for Children	Dr. Van Orden
Spring, 1972		
290:501	Introduction to Educational Tests and Measurement	Dr. Geyer
Fall, 1972-1973		
290:540	Introduction to Learning	Dr. Montare Dr. Gillooly Dr. Cox
299:566	Seminar in Reading Research and Supervision	Dr. Swalm
Spring, 1973		
320:599	Master's Thesis Research	Dr. Finn
290:525	The Psychology of the Exceptional Child	Dr. Holowinsky

Courses taken at Trenton State College

Spring, 1970		Instructor
513:20	Corrective and Remedial Techniques of Teaching Reading	Dr. Waltheu
Spring, 19[illegible]2		
529:20	Learning and Behavior Problems of the Handicapped Child	Dr. Lemeshaw

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Educational Background:

High School:	Passaic High School Passaic, New Jersey
College:	Montclair State College Montclair, New Jersey B.A., June, 1953 Major--English Minor--Elementary Education

Professional Experience:

1953-1955	Elementary Teacher Sixth and Seventh Grades Clifton, New Jersey
1955-1957	Junior High School Teacher Eighth and Ninth Grades Clifton, New Jersey
1965-1966	Nursery School Teacher Lawrence Township, New Jersey
1966-1968	Title I Teacher Fifth and Sixth Grades Lawrence Township, New Jersey
1968-1972	Reading Teacher Elementary School Lawrence Township, New Jersey
1972-1973	Reading Teacher Fourth Grade School Lawrence Township, New Jersey

END

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